

# Operator's Instruction Manual



The Groundhog GP360 Fusion & Fusion+  
Welfare Units have been approved by VCA.

# GP360 Fusion & Fusion+

from Groundhog



This manual will be supplied to you on delivery of your Welfare Accommodation Unit and contains important operating procedures, safety instructions and servicing information in regards to your Groundhog.

The Groundhog manual contains guidance, advice and helpful cautionary notes that will inform you how to operate your Groundhog correctly.

All information, Photographs, illustrations and specifications in your Groundhog manual are based on the latest information at the date of publication.

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## Section 1

### Approximate Weights and Dimensions

Gross Weight	1650 kg
Length	3.6 m (5.1 m inc. drawbar)
Width	2.3 m
Height (towing)	2.7 m
Height (in service)	2.4 m

## Section 2

### Warranty

Your Groundhog is covered by a 12 month warranty. Groundhog undertakes to replace or repair, free of charge, any defect which the company considers itself responsible for or materials within 12 months of the sale date, except for:

- Defects arising from neglect, misuse or unauthorised modifications.
- Damage caused by abuse, misuse, dropping or other similar damage caused by or as a result of failure to follow transportation, storage, loading or operating instructions.
- Alterations, additions or repairs carried out by persons other than the Manufacturer or their recognised distributors.
- Transportation or shipment costs to and from the Manufacturer or their recognised agents, for repair or assessment against a warranty claim, on any Mobile Welfare Unit or component.
- Materials and/or labour costs to renew, repair or replace components due to fair wear and tear.
- Faults arising from the use of non-standard or additional parts, or any consequential damage or wear caused by the fitting or use of such parts.
- Any white goods fitted, i.e. microwave, kettle etc. are only covered by a 3 month warranty period.

### Modifications

If additional equipment or any third party work, modifications or alterations are to be carried out on the Mobile Welfare Unit which will involve any welding, drilling or any form of cutting or distortion of materials, full written approval must be obtained from the Manufacturer prior to the work being carried out.

### IMPORTANT

Warranty may at the sole discretion of the Manufacturer be void if the scheduled service/inspections are not carried out in accordance with the service manual.

The Manufacturer and/or their recognised agents, directors, employees or insurers will not be held liable for consequential or other damages, losses or expenses in connection with or by reason of/or the inability to use the Mobile Welfare Unit for any purpose.

## Section 3

## Description

The Fusion Groundhog Mobile Welfare range are road towable welfare units suitable for up to 6 personnel.

This self contained unit has a toilet/washroom, a drying room and a kitchen/restroom.

Electrical supply can be taken either from a mains hook up or from the built-in generator.

Its unique design means that raising and lowering the body requires little effort from the operator and takes just 3 minutes from disconnecting to being usable.

## Guidance

The information and instructions included in this manual are provided to help you get the best possible service from your Groundhog.

To ensure that The Groundhog is used safely and responsibly, we strongly recommend that this manual is read by all users prior to its operation, and that the recommendations are followed at all times.

Groundhog operate a policy of constant improvement and reserve the right to change specifications without notice.

Self contained unit:  
toilet/washroom, a  
drying room and a  
kitchen/restroom



Secured in less  
than 3 minutes.



0 min

3 min



## Section 4

### Safety

---

Before using this equipment and to avoid personal injury, carefully read and understand these instructions. If there is anything you do not understand, DO NOT use this equipment, contact the supplier for advice.

Make sure you are aware of all safety requirements and that this equipment is suitable for the location.

When raising or lowering the unit, the area must be cordoned off to create a safe zone from the general public and bystanders.

This equipment must not be moved, set up, used or dismantled by persons who are under the influence of alcohol or drugs. Do not use this equipment if you are tired or unwell.

You MUST perform a risk assessment before siting this equipment to ensure your safety and the safety of others.

Wear suitable personal protective equipment whenever making adjustments to the unit.

Do not wear loose jewellery or clothing that may get in the way or become trapped in the mechanism.

Carefully inspect the Groundhog before towing or before use. If there is any doubt about its condition, **DO NOT CONTINUE**.

This equipment may only be used on level ground, which is able to bear its weight and its load.

### Risk assessment

---

It is the user's responsibility to carry out a full risk assessment before using the Groundhog. The risk assessment should establish a safe zone including (but not limited to) ground, side and overhead hazards such as power supply and communication cables, lighting systems, drainage systems and other services.

Ensure that the ground on which the unit is being used is smooth, level and capable of withstanding the Groundhogs' weight plus its load.

If permission is required, obtain it before use.

### Preparation for towing

---

Before towing the Groundhog, you must ensure that the fresh water, waste water and drinking water containers are emptied and water pump switched off (Fusion+ only).

Switch the generator OFF.

Empty the toilet and wash hand basin reservoirs.

Pack away all utensils, cups, plates etc.

Lock all doors, window and protective shutters.

### Work area preparation

---

Clear the ground area, where the Groundhog is to be used, of obstructions, anything that may puncture the tyres and similar items. Once the unit is in the work area, use barriers and tape to create a safe zone. Keep bystanders and unauthorised persons away when setting the unit up.

Section 5 Exterior

1. Steel Window Shutter

2. Nosecone

3. Towing Assembly
4. Hydraulic Jacks

5. Axle

6. Wheel
7. Main Entrance

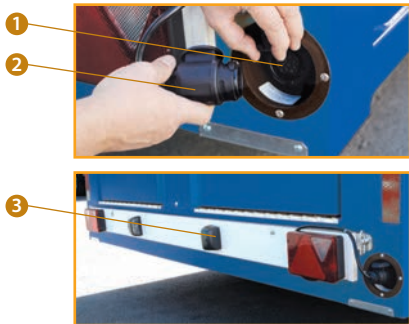
8. Toilet/Washroom Entrance

9. Warm Room Entrance



Road lighting

1. Recessed Lighting Socket
2. Light Board Plug
3. Light Board

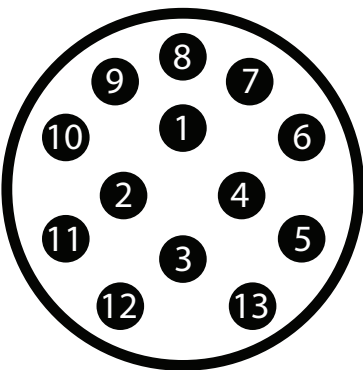


Towing assembly

1. Jockey Wheel
2. Jockey Wheel Securing Handle
3. Parking Brake Lever
4. Breakaway Cable
5. Lighting Cable and Plug
6. Coupling Head



Wiring cable



13 pin Euro plug

Pin No.	Function	Nominal wire size	Wire colour
1	Left indicator	1.5 mm	Yellow
2	Rear fog lamp	1.5 mm	Blue
3	Earth	2.5 mm	White
4	Right indicator	1.5 mm	Green
5	Right tail lamp	1.5 mm	Brown
6	Brake lamp	1.5 mm	Red
7	Left tail lamp	1.5 mm	Black
8	Reverse lamp	1.5 mm	Pink
9	Permanent power	2.5 mm	Orange
10	Switched supply (for fridge)	2.5 mm	Grey
11	Earth for pin 10	2.5 mm	White/black
12	No current allocation		
13	Earth for pin 9	2.5 mm	White/red

## Section 6

### Positioning

The Groundhog is designed for use on firm level ground which is able to support the weight of the unit and its load. During use, the trailer **MUST** be uncoupled from the tow vehicle.

Drive the Groundhog to where it will be used and manoeuvre into position. Apply the towing vehicle's parking brake and switch off the engine. Next, apply the Groundhog's parking brake.

Uncouple the Groundhog from the towing vehicle and move the vehicle to a safe location.

Make a thorough inspection of the ground below the Groundhog and remove any foreign objects which may cause problems.

Remove rear lighting board before lowering the Groundhog.

### Raising and lowering

The Groundhog is fitted with a swinging axle which allows the shell to be lowered to the ground. The design also means that the wheels are "hidden" under the body of the unit.

Once lowered, the controls and tow hitch are secure under a lockable steel cover (nosecone).

#### CAUTION

Keep clear of the raised unit at **ALL TIMES**. **NEVER** enter the underside of the shell for any reason unless it is being held by suitable supports (correctly rated axle stands for example).

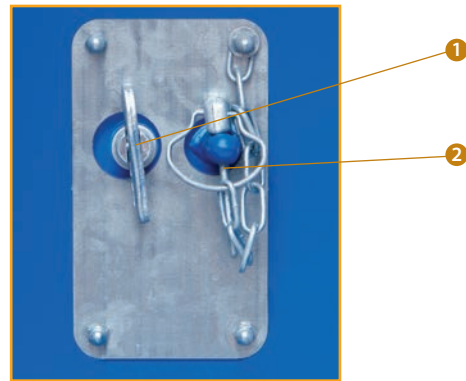
**DO NOT** use the hydraulic jacks as a means of support. Use them **ONLY** for changing the unit from road towable to static and vice versa.

### Nosecone

Take a firm hold of the nosecone security cover handle to prevent it from swinging down and causing injury. Remove the safety clip and release the antiluce clip, then carefully lower the cover.

1. Nosecone Cover Securing Bolt (Anti Luce)
2. Nosecone Cover Safety Clip (Pin & Chain)

Once in position, use the key supplied to lock the nosecone lock. If this lock is not secured, the unit could be removed from site without requiring entry.



Lock

Nosecone



## Section 7

## Single axle electric hydraulic operating instructions - press button

### Arrival at site

Lower rams by pressing UP button (1) on control box (Fig A) until road wheels are clear of ground

Move spring bolt (4) into open position (Fig B)

Pull lever (5) into open position (Fig C)

Remove jockey wheel (6 & 7), by turning anti-clockwise, release locking handle, remove jockey wheel, handle and pad (Fig D)

Release handbrake to "Off" position

Fig E shows removed jockey wheel

Press DOWN button (2) on control box (Fig A) to lower unit to the ground

Lower steel shroud over drawbar and lock in closed position

### Departure from site

Open shroud and secure in upright position with antiluce locking catch

Pull handbrake to the "ON" position

Press UP button until road wheels are clear of ground

Replace jockey wheel into its clamp with the pad and locking handle, rotating jockey wheel handle clockwise to attach lower wheel shaft

Push lever (5) to lock axle pins

Release spring bolt (4)

Press DOWN button (2) to raise the rams until the unit is level, on its wheels, supported by jockey wheel

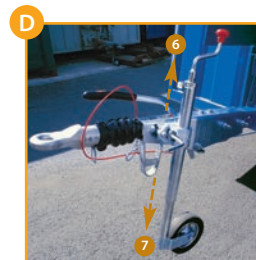
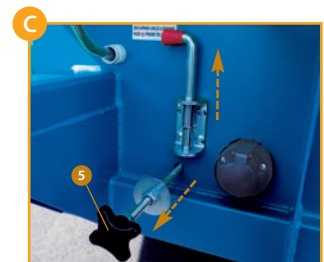
Continue to press DOWN button to fully retract hydraulic rams

## CAUTION

Keep clear of the raised unit at **ALL TIMES**.

**NEVER** enter the underside of the shell for any reason unless it is being held by suitable supports (correctly rated axle stands for example).

**DO NOT** use the hydraulic jacks as a means of support. Use them **ONLY** for changing the unit from road towable to static and vice versa.



## Section 7 cont.

## Twin Axle Electric Hydraulic Operating Instructions - GP500 only

### Arrival at site

Lower front rams (3) by pressing the offside 'UP' button (1) until front wheels are clear of ground (Fig A).

Remove jockey wheel by turning anti-clockwise, release locking handle, remove jockey wheel, handle and pad (Fig B)

Lower rear rams by pressing the nearside 'UP' button (1) until all wheels are clear of ground (Fig C).

Release handbrake to "Off" position

Move spring bolt (4) into open position (Fig D)

Pull knob (5) fully out to release axle pins (Fig D)

Press the 'Down' buttons (2) alternately (Fig A) to lower unit to the ground

Lower steel shroud over drawbar and lock in closed position (Fig E)

### Departure from site

Open shroud and secure in upright position with antiluce locking catch (Fig F)

Raise front rams by Pressing the offside 'UP' button (1), until front wheels are clear of ground

Replace jockey wheel into its clamp with the pad and locking handle, rotating jockey wheel handle clockwise to attach lower wheel shaft

Lower rear rams by pressing the nearside 'Up' button (1) until all wheels are clear of ground

Push in knob (5) to lock axle pin (Fig D)

Release spring bolt (4) (Fig D)

Pull handbrake to the "ON" position

Press the 'Down' buttons (2) alternately until unit sits level on all wheels and is supported by the jockey wheel

Continue to press both 'Down' buttons (Fig A) until hydraulic rams are retracted fully

## CAUTION

Keep clear of the raised unit at **ALL TIMES**. NEVER enter the underside of the shell for any reason unless it is being held by suitable supports (correctly rated axle stands for example).

**DO NOT** use the hydraulic jacks as a means of support. Use them **ONLY** for changing the unit from road towable to static and vice versa.

## NOTE:

In the event of a flat battery, 12 volt power cables (supplied) can be connected to the grey plug mounted above the drawbar and an external 12 volt battery.



### Section 8

If you suffer a puncture when towing the welfare unit, follow the next set of instructions **ONLY** if the unit is on level ground and in a position which does not place the operators life at risk.

Apply the welfare unit's parking brake and unhitch the unit from the towing vehicle.

Remove both lower retaining bolts from the leaf-spring mounting plate. M10 - 17mm Spanners x2.

Use the hydraulic system to jack the unit up until you are able to gain access to the wheel nuts.

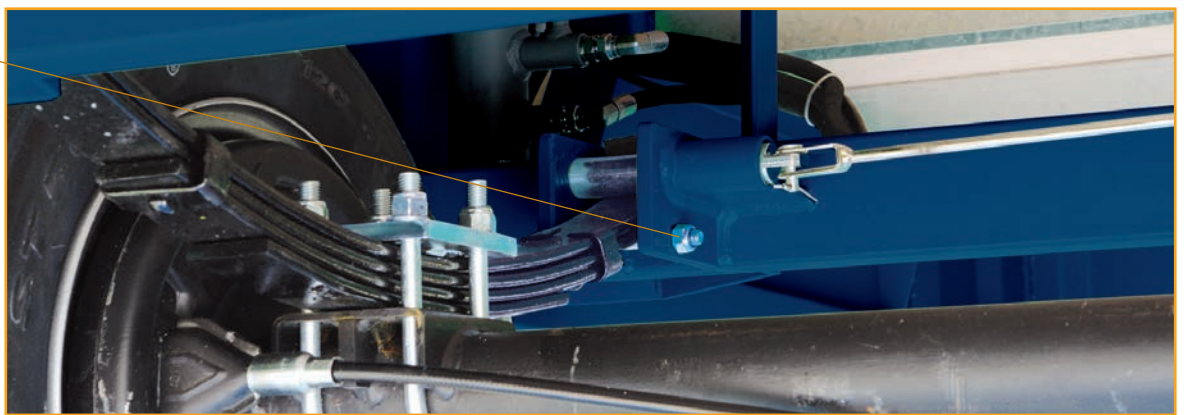
Remove the wheel and replace with a suitable spare wheel.

Now lower the unit back onto its wheels, then replace the two lower retaining bolts.

Check that the wheel nuts are correctly tightened (120 NM). M16 - 24mm socket.



**Lower retaining bolt**  
M10 x 100mm  
Hex Head Bolt  
c/w Nyloc Nut



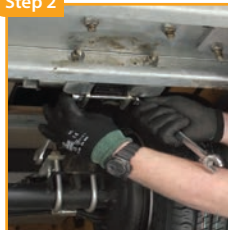
## Replacing a wheel - Step by step guide

**Step 1**



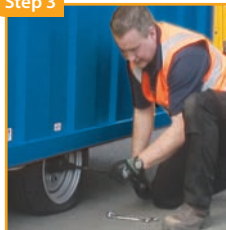
Apply the welfare unit's parking brake and unhitch the unit from the towing vehicle.

**Step 2**



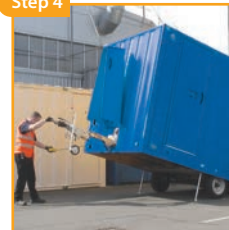
Remove lower retaining bolt.

**Step 3**



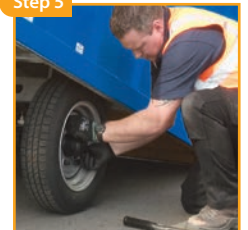
Loosen wheel nuts.

**Step 4**



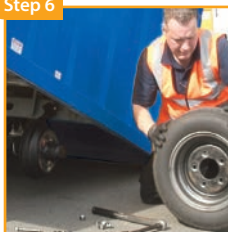
Lift unit using hydraulic system.

**Step 5**



Remove wheel nuts.

**Step 6**



Remove wheel.  
Replace punctured tyre.

**Step 7**



Tighten wheel nuts.

**Step 8**



Lower unit back down to towing position.

**Step 9**



Replace lower retaining bolt.

**Step 10**



Tighten wheel nuts to (120 NM).

## Section 9

### Towing restrictions

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You are advised that the Groundhog Mobile Welfare Unit should not be towed at speeds greater than 50 mph. The unit is not designed for high speed towing or manoeuvring.

### Towing vehicle suitability

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The towing vehicle must be suitable for towing the Groundhog, which has a gross weight of 1800 kg (GP360). 2300 kg (GP500 Twin Axle).

### Towing brackets

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The towing vehicle must have a properly fitted, manufacturer approved towing bracket of the correct specification for the vehicle and be fitted in accordance with the vehicle manufacturers recommendations.

### Vehicle registration plate

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The welfare unit must display an approved style registration "number" plate with the same registration mark of the towing vehicle whenever used on the road.

### Towing mirrors

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You may require wing mirror extensions if your view is obscured by the welfare unit.

### Attaching the Groundhog to the towing vehicle

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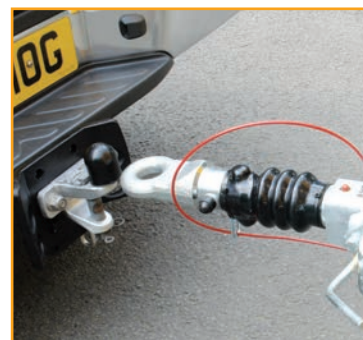
The following instructions are conditional upon the Mobile Welfare Unit being ready to tow.

1. Position the unit on level ground and apply the parking brake.
2. **Ball** Turn the jockey wheel operating handle anti-clockwise to raise the coupling head higher than the vehicle's tow ball. **(Fig A)**

2. **Eye** Turn the jockey wheel operating handle anti-clockwise to raise the coupling head in line with the vehicle's tow jaw, remove R-Clip and then remove towing pin from vehicle's tow jaw. **(Fig B)**
3. **Ball** Manoeuvre the towing vehicle to the unit until the coupling head is directly over the tow ball. Fully apply the handbrake of the towing vehicle and switch its engine off. **(Fig C)**
3. **Eye** Manoeuvre the towing vehicle to the unit until the coupling head is directly inserted into the vehicle's tow jaw. Fully apply the handbrake of the towing vehicle and switch its engine off. **(Fig D)**
4. **Ball** Raise and hold the coupling head handle in the raised position **(Fig E)**. Now, turn the jockey wheel operating handle clockwise until the coupling head is in place on the ball. Allow the coupling to close on the ball **(Fig F)**. Carefully check that the ball is correctly in place.
4. **Eye** Carefully check that the Eye is correctly in place. Now, fully insert the towing pin through the vehicle's tow jaw and eye connection. Reattach R-Clip to pin to ensure pin cannot work itself free when towing. **(Fig G)**
5. **Ball & Eye** Attach the breakaway cable to a suitable location on the towing vehicle. **(Fig H)**
6. **Ball & Eye** Once the unit is coupled to the towing vehicle, release the welfare unit's handbrake. **(Fig I)**
7. **Ball & Eye** Fully raise the jockey wheel, then raise and lock the jockey wheel assembly clear of the ground with the wheel facing to the rear **(Fig J for Ball) (Fig K for Eye)**. Secure the clamp. Attach the lighting cable plug to the towing vehicle's socket and check that all the lights are working correctly. **(Fig L)**



## Section 9

**Ball connection****Eye connection****Universal ball/pin connection**

These images refer to towing instructions on previous page.

**Figure A (Ball)****Figure B (Eye)****Figure C (Ball)****Figure D (Eye)****Figure E (Ball)****Figure F (Ball)****Figure G (Eye)****Figure H (Ball & Eye)****Figure I (Ball & Eye)****Figure J (Ball)****Figure K (Eye)****Figure L (Ball & Eye)**





# Fusion Interior

The following section refers to the interior of the GP360 Fusion.

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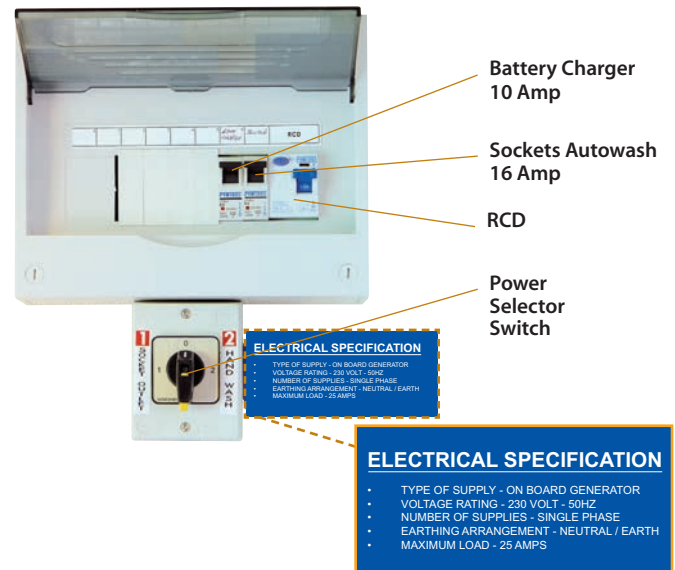
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Heating outlets/inlets	19
Remote temperature sensor	19
Battery Guard	20
Pro Charge Ultra	20
Window	21
Toilet	21
12V Teal Handeman & Timer Switch	21

## Section 10

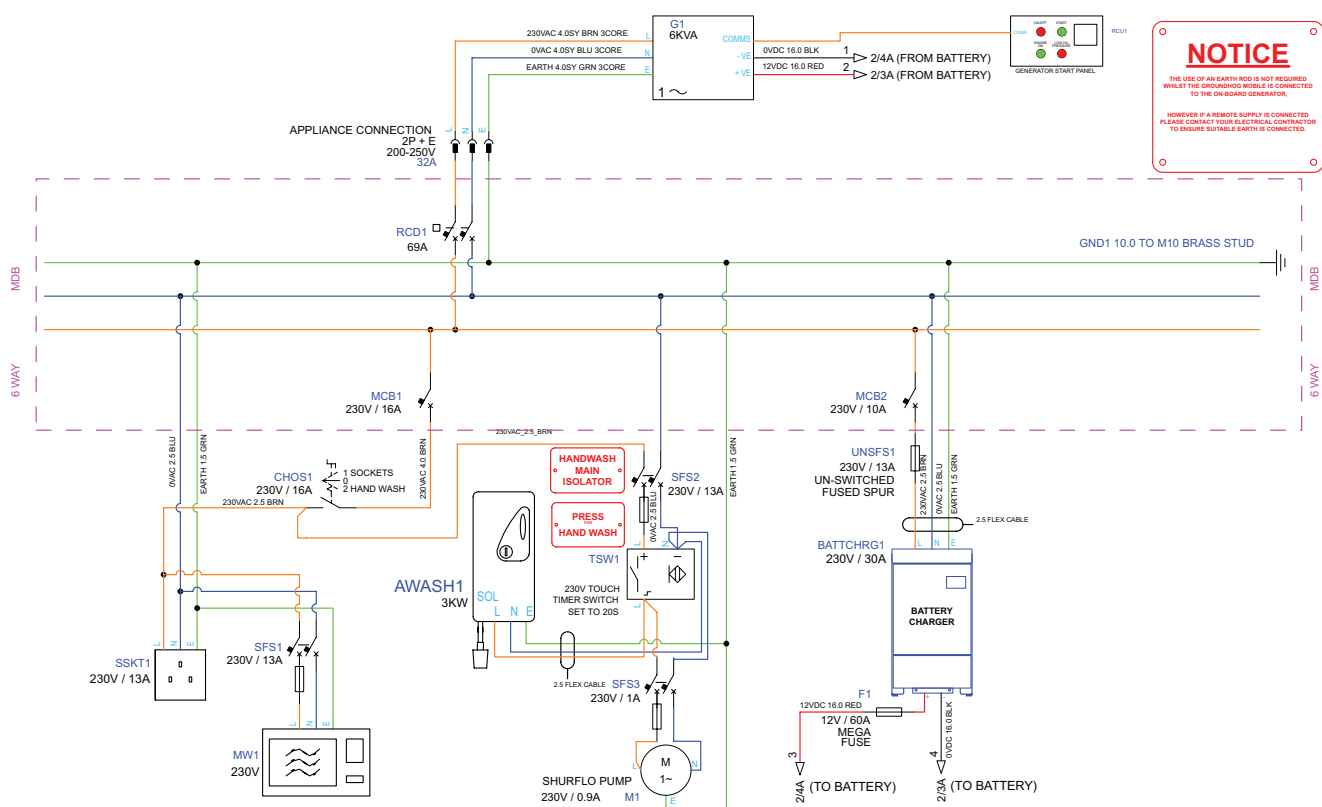
## Internal electrical system

In the kitchen/rest room there is a consumer unit which controls the power distribution and is fitted with suitably rated MCB's and an RCD.

Below the unit is a power selector switch used to select either the power outlet sockets or the hand wash water heater. If the 'Hand Wash' is selected, no power will be available from the power sockets. This is to prevent overload on generator.



## 230V wiring diagram



## Earth Bonding Requirements

### Regulations 717.411.6.2, 717.415 and 415.1.1

Groundhog Mobile units observe all above regulations.

The onboard generator is fitted with a 25A M.C.B, 30mA R.C.D that also protects the system.

A further 63A, 30mA R.C.D is fitted within the distribution board feeding all the internal appliances. The total electrical installation is individually tested and certified by an independent electrical contractor, and appropriate test certificates issued prior to the unit leaving the factory.

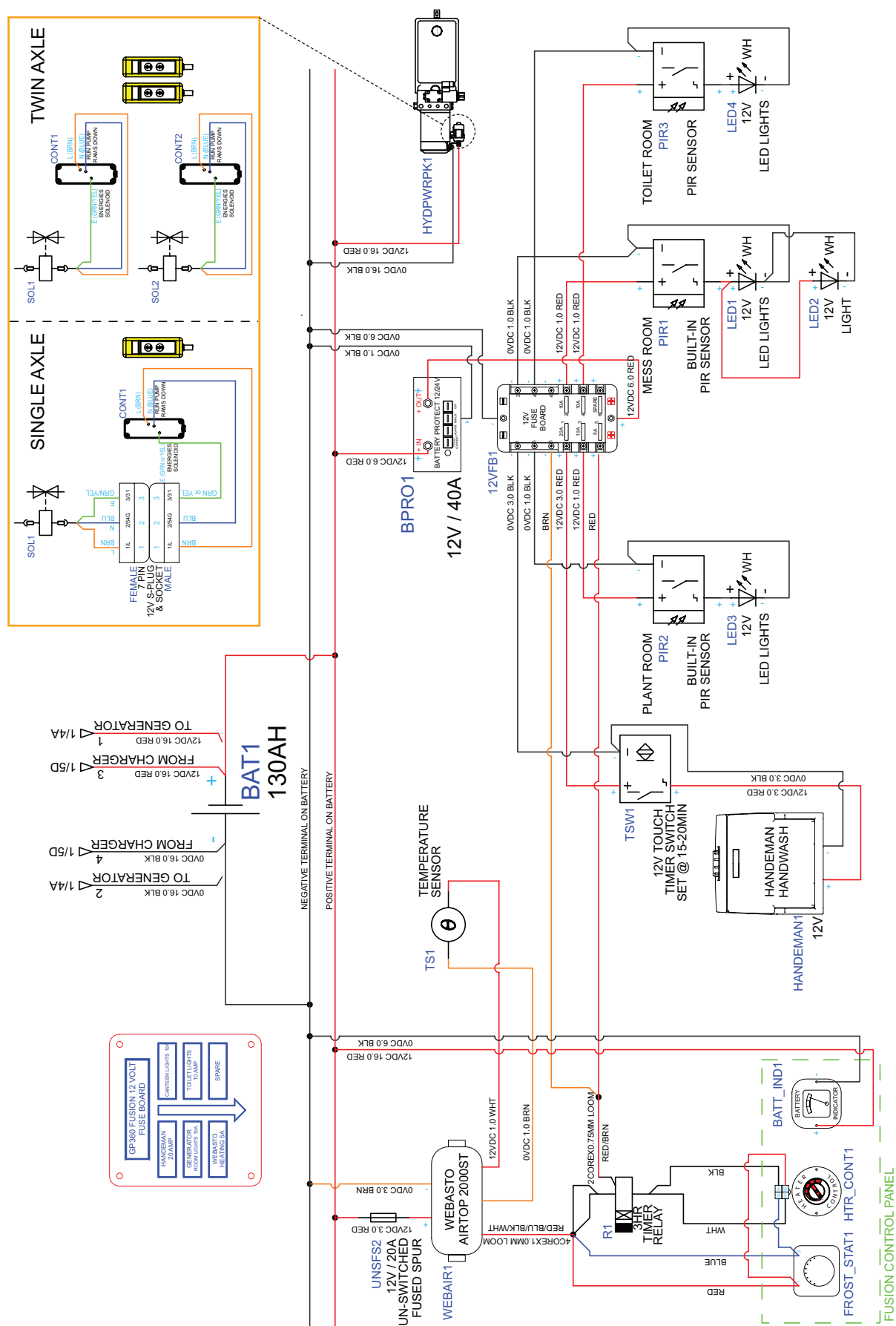
Mobile units are operated via the onboard generator, they do not require to be earthed separately via an earth rod, unless it has been instructed under certain circumstances, however a rod connection point has been provided in case of the supply being via a separate generator

or mains power and to comply with BS7671 and Regulation No:717.411.4 T.N. System in the UK a TN-C-S System shall not be used to supply a mobile or transportable unit except:- Where the installation is continuously under the supervision of a skilled or instructed person and the suitability and effectiveness of the means of earthing has been confirmed before the connection is made.

**Note:** If an external earth rod/facility is connected to the unit this must be inspected and tested to ensure the correct level of earth protection is achieved.

**Testing:** Once the units leave the Groundhog factory it is the Hirer/User to ensure once on site it is visually inspected on a regular basis and an electrical inspection/test is undertaken every 12 months by a suitably competent approved E.C.A or N.I.C, contractor/engineer and an appropriate certificate is supplied and a copy is kept within the holder fitted to each unit.

## 12V wiring diagram



Section 10  
cont.

Microwave oven

The model of microwave oven will vary and you are advised to use the manufacturers instructions supplied with the Welfare Unit.

However, here is a brief description of the three basic controls.

Heat setting

Turn the dial to select the level of cooking.

Timer dial

Turn the dial clockwise to the time required, a bell will ring when the cooking time is complete.

Door release

To open the door and stop the microwave, press the door release button.



Cup dispenser

This is a simple holder for disposable cups which is filled from the top and dispensed from the bottom.





Section 10  
cont.

## Drinking water

Drinking water should only be taken from the wall mounted 'drinking water' container. This container can be filled from a suitable mains water supply provided the water is fit for human consumption. Alternatively, refill the container with bottled water.

Always secure to its wall mount shelf with the securing strap provided.

**DO NOT** use the container for any other purpose. If you do, it must be disposed of and a replacement obtained.



## Soap dispenser

To insert or remove a soap cartridge, first push the release button located under the unit(A), the catch will release the cover, lower carefully. Simply remove soap cartridge and replace(B).

To obtain soap, press the dosing button with the palm of your hand.



## Paper towel dispenser

The towel dispenser is designed for use with paper towels. To open, push key in to the top of the front panel(C) and swing down.

Fill the unit with the towels(D) and close the panel ensuring the release button re-engages.



## Under worktop storage

Situated beneath work surface is a storage area for cutlery, cups, plates and a storage container. Before towing ensure all loose items are secured away.



Section 10  
**cont.**  
Kitchen/  
Rest Room

## Water heater & tap

The handwash delivers warm water instantaneously and is delivered via a pump located beneath the worktop. The water used is stored in a 20 litre container beneath the sink. Only fill the container with fresh clean water.

Before operating the tap and heater, first check that the power selector switch situated below the main distribution box is set to the '2 Handwash' position. Secondly, check that the fresh water container is full.

To operate the heater first turn on the 'Handwash Main Isolator(A)' then press the handwash touch button(B).

To adjust the water temperature turn the heat dial clockwise to decrease and anti-clockwise to increase.

After approximately 20-30 seconds the handwash will automatically turn off.

## Sink & waste water

Waste water from the sink is collected in a container positioned next to the fresh water container. Regularly check the container for content and empty as necessary.

Handwash Isolator Switch

Paper Towel Dispenser

Water Heater Button

Heat Adjuster

Soap Dispenser

Sink



A



B



Fresh Water

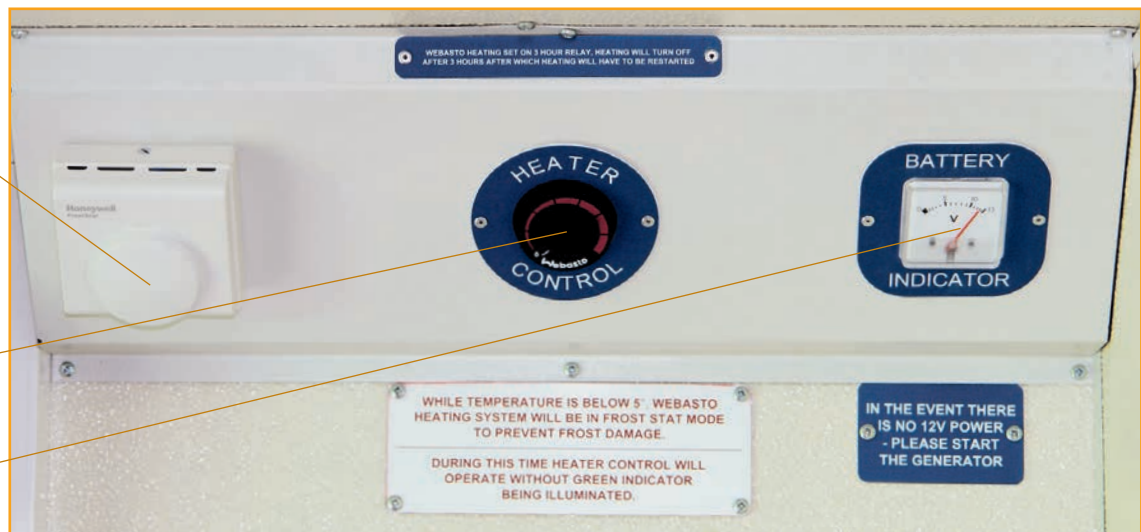
Waste Water

Section 10  
cont.

Diesel powered  
heating system  
heating frost stat  
(set to 5°C)

Heater control

Battery voltage  
indicator



## Diesel powered Air Top 2000ST heating system

To operate the airtop heating system simply rotate the heater controller on the control panel above the work top in the messroom clockwise until the green triangle illuminates. Using the rotary controller you can adjust the fan speed of the heater to give you variable temperatures for different climates. After use return the rotary

controller to the off position, failing this the heater has a built in 3 hour timer relay which will shut the heating down after 3 hours of operation.

To restart the heating simply turn the rotary controller anti clockwise to the off position, then rotate clockwise to your preferred heat setting.



Diesel powered heating system exhaust outlet

**CAUTION, HOT: DO NOT OBSTRUCT**



Diesel powered Air Top 2000ST heating system

## Section 10 cont.

### Diesel powered heating system fuel pump and filter

Diesel powered heating system fuel pump and filter are situated in the generator room. To gain access remove no.8 pan head screws from cover.



### Frost stat protection

While the ambient air temperature in the messroom is below 5 degrees the heating system will be in frost stat mode to prevent frost damage within the unit. During this time the heater will run to keep the ambient air temperature just above 5 degrees, if you wish to increase the temperature rotate the rotary controller clockwise to preferred heat setting.

**Be aware while the heating system is in frost stat mode the rotary controller will operate as normal but the green triangle will not illuminate.**

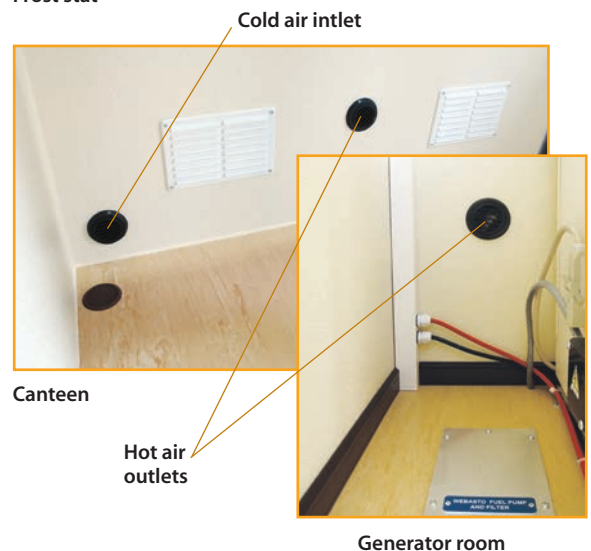


Frost stat

### Heating outlets/inlets

#### CAUTION

**DO NOT** obstruct outlets/inlets as this could cause the diesel powered heating system to overheat.



### Remote temperature sensor

Remote temperature sensor monitors the ambient air temperature of the messroom.

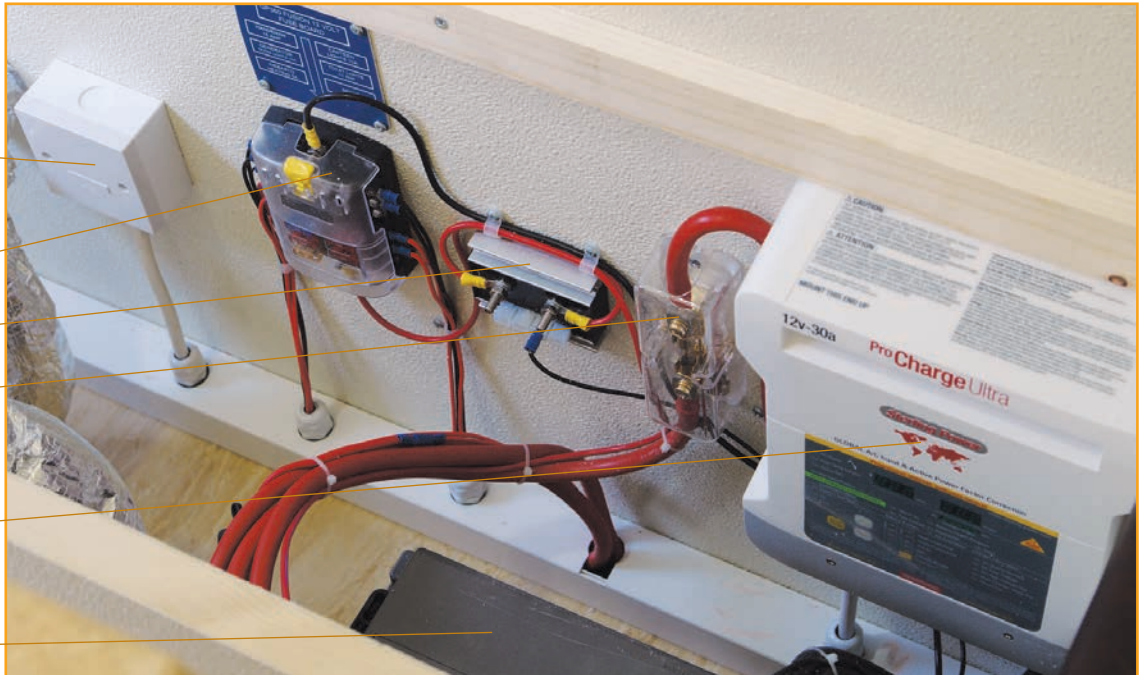




Section 10  
cont.Non Switched  
Fused Spur  
(Battery Charger)

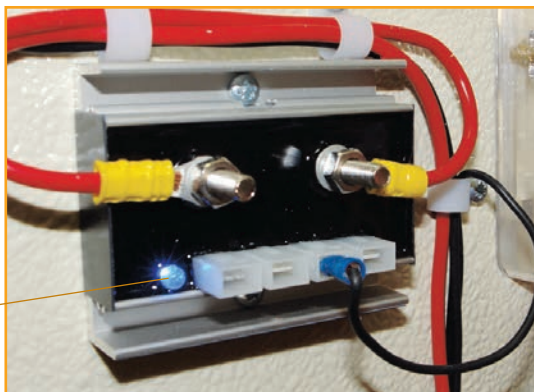
12V Fuse Board

Battery Guard

Inline Fuse  
60 Amp (From  
Charger to  
Battery)Sterling Power  
30 Amp Pro  
Charge130 Amp/Hour  
AGM Battery

## Battery Guard

The universal programmable Battery Guard prevents the excessive discharge of the Battery (which would damage the battery) and protects electronic appliances against overvoltage. The BG has an "Automatic Board System Detection"; the BG automatically detects the battery voltage (12v). This does not need to be programmed manually.



Battery Guard

The battery guard is set to an under voltage of 11.6 volts at which point all 12 volt power will be cut to the unit. To gain 12 volt power simply start the generator and leave to run to fully recharge the 130 amp hour battery (After 1 minute of the generator running you should have full use of the 12 volt power).

The generator has a built in run timer which will allow the generator to run for 2 hours at which point it will shut itself down. After the generator has run you should find you have sufficient 12 volt power to run the 12 volt appliances for around 6 hours.

## Pro Charge Ultra

The Pro Charge Ultra unit will operate when generator is running. During this period the Pro Charge Ultra unit charges the 130A/hr battery.



## Section 10 cont.

### Window

The window is protected by steel shutters, which are locked internally and can only be opened from inside the rest room.

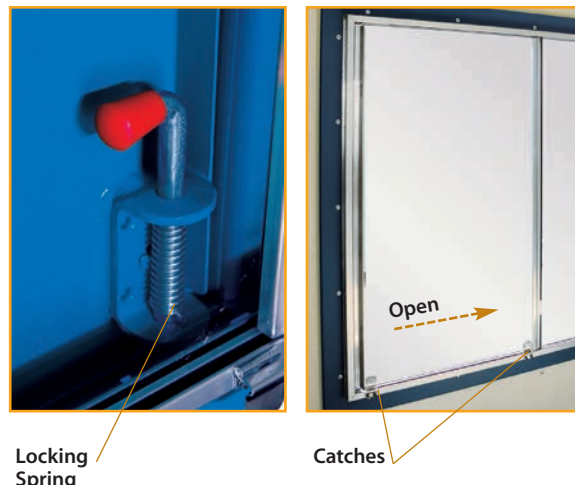
To access the shutters, first open the window.



Secure shutters to unit

To open the window, release the catch and slide the left hand glass panel open, release lock bolt to open the steel shutters.

When leaving the welfare unit unattended or when transporting, the steel shutters should be closed and locked.



Locking Spring

Catches

## Section 10 cont. Hand pump toilet

### Toilet

The toilet is a self contained unit which uses toilet fluids for flushing. Filling and emptying the toilet reservoir should be undertaken by a suitable toilet service provider.

To operate the toilet flush after use, move the pump lever back and forth until the toilet bowl is clear.



Toilet

Pump Handle

### 12V Teal Handeman & Timer Switch

To operate Teal Handeman press touch button on timer switch then lower sink into position. Pull lever on tap for water supply, after use return sink to closed position to empty basin into the toilet effluent tank.

#### CHECK WATER LEVEL DAILY

In the event of no water, the LED will flash and the power will be locked out. To reset refill with water and remove and replace the fuse.

Timer Switch is set for 15 - 20 minutes after which power is cut to Handeman.



LED light

Handeman master timer switch

- Holds 2.5 litres fresh water
- Holds 2 litres of wash water
- Low voltage at 10.5V

**N.B. In Freezing Weather, Drain the Unit over night**

# Fusion+ Interior

The following section refers to the interior of the GP360 Fusion+.

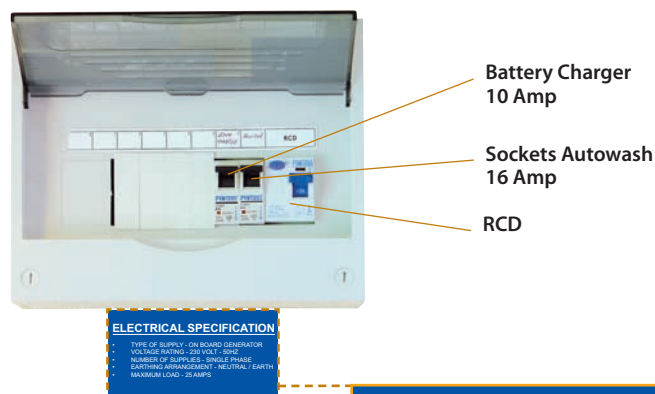
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<b>Fusion+ Interior</b>	<b>22-31</b>
Internal electrical system	23-24
Microwave oven	25
Cup dispenser	25
Drinking water	26
Soap dispenser	26
Paper towel dispenser	26
Under worktop storage	26
Sink wash area	27
Waste water	27
Setting the water temperature	27
Diesel powered Thermo Top C heating system	28
Diesel powered heating system fuel pump and filter	29
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Heating outlets/inlets	29
Remote temperature sensor	29
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Window	31
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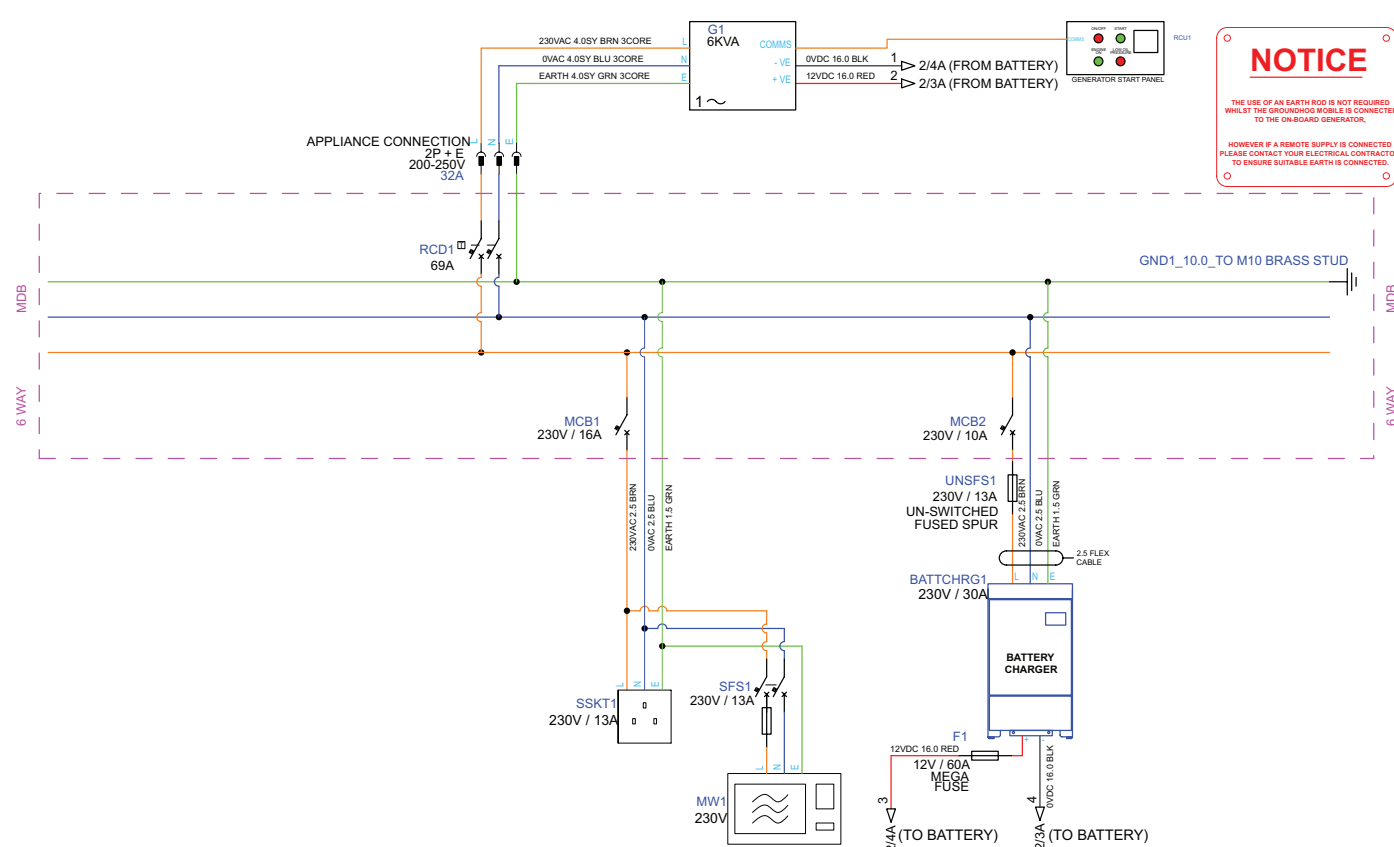
## Section 10

## Internal electrical system

In the kitchen/rest room there is a consumer unit which controls the power distribution and is fitted with suitably rated MCB's and an RCD.



## 230V wiring diagram



## Earth Bonding Requirements

**Regulations 717.411.6.2, 717.415 and 415.1.1**

Groundhog Mobile units observe all above regulations.

The onboard generator is fitted with a 25A M.C.B, 30mA R.C.D that also protects the system.

A further 63A, 30mA R.C.D is fitted within the distribution board feeding all the internal appliances. The total electrical installation is individually tested and certified by an independent electrical contractor, and appropriate test certificates issued prior to the unit leaving the factory.

Mobile units are operated via the onboard generator, they do not require to be earthed separately via an earth rod, unless it has been instructed under certain circumstances, however a rod connection point has been provided in case of the supply being via a separate generator

or mains power and to comply with BS7671 and Regulation No:717.411.4 T.N. System in the UK A TN-C-S System shall not be used to supply a mobile or transportable unit except: Where the installation is continuously under the supervision of a skilled or instructed person and the suitability and effectiveness of the means of earthing has been confirmed before the connection is made.

**Note:** If an external earth rod/facility is connected to the unit this must be inspected and tested to ensure the correct level of earth protection is achieved.

**Testing:** Once the units leave the Groundhog factory it is the Hirer/User to ensure once on site it is visually inspected on a regular basis and an electrical inspection/test is undertaken every 12 months by a suitably competent approved E.C.A or N.I.C, contractor/engineer and an appropriate certificate is supplied and a copy is kept within the holder fitted to each unit.



## Section 10 cont.

### Microwave oven

The model of microwave oven will vary and you are advised to use the manufacturers instructions supplied with the Welfare Unit.

However, here is a brief description of the three basic controls.

#### Heat setting

Turn the dial to select the level of cooking.

#### Timer dial

Turn the dial clockwise to the time required, a bell will ring when the cooking time is complete.

#### Door release

To open the door and stop the microwave, press the door release button.



### Cup dispenser

This is a simple holder for disposable cups which is filled from the top and dispensed from the bottom.





Section 10  
cont.

## Drinking water

Drinking water should only be taken from the wall mounted 'drinking water' container. This container can be filled from a suitable mains water supply provided the water is fit for human consumption. Alternatively, refill the container with bottled water.

Always secure to its wall mount shelf with the securing strap provided.

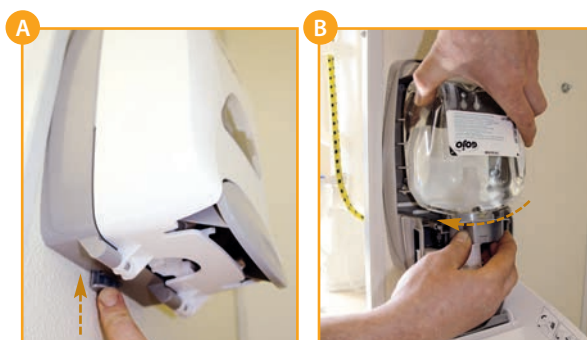
**DO NOT** use the container for any other purpose. If you do, it must be disposed of and a replacement obtained.



## Soap dispenser

To insert or remove a soap cartridge, first push the release button located under the unit(A), the catch will release the cover, lower carefully. Simply remove soap cartridge and replace(B).

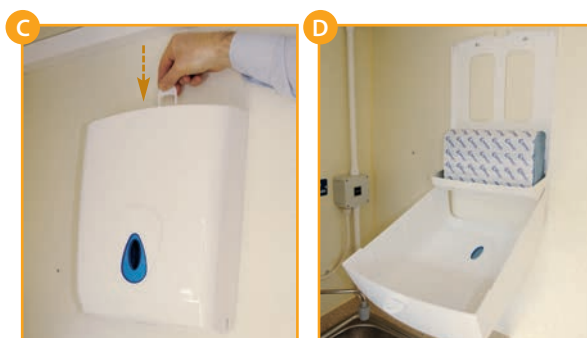
To obtain soap, press the dosing button with the palm of your hand.



## Paper towel dispenser

The towel dispenser is designed for use with paper towels. To open, push key in to the top of the front panel(C) and swing down.

Fill the unit with the towels(D) and close the panel ensuring the release button re-engages.



## Under worktop storage

Situated beneath work surface is a storage area for cutlery, cups, plates and a storage container. Before towing ensure all loose items are secured away.



Section 10  
**cont.**  
Kitchen/  
Rest Room

## Sink wash area

The wash area includes a sink with hot water tap, soap dispenser and paper towel dispenser. To operate the hot water push down percussion tap and hot water will flow instantly.

## Waste water

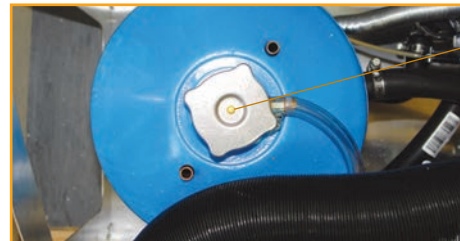
Waste water from the sink is collected in a container positioned next to the fresh water container. Regularly check the container for content and empty as necessary.

## Setting the water temperature

Under the rear seating of the canteen you will find a blue calorifier tank on which you will find a mixer tap which you can turn up or down to alter the temperature of the water from both push button taps in your welfare unit.



Mixer tap for altering water temperature

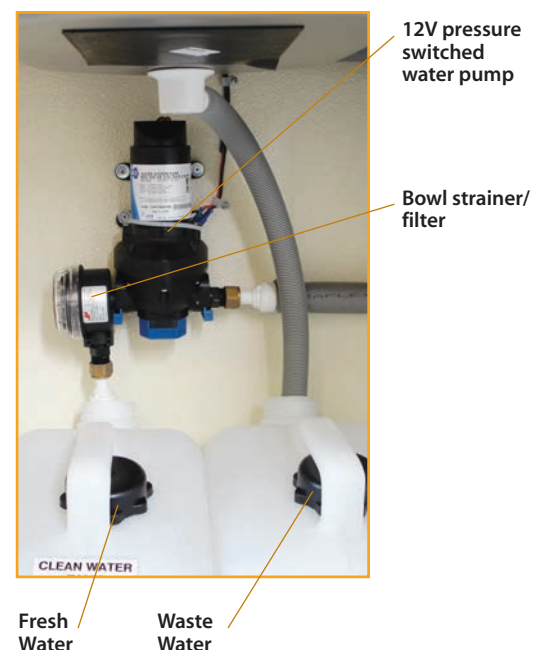


Filler cap for anti freeze water



Fresh water drain off valve

**CAUTION: MIXER TAP SET TO OPTIMUM TEMPERATURE. SCALDING MAY OCCUR IF ALTERED.**



Section 10  
cont.

Diesel powered  
heating system  
heating frost stat  
(set to 5°C)

Diesel powered  
heating system  
heating isolator  
switch (fig 1)

Diesel powered  
heating system  
thermotop  
heating controls

Fan speed

Heat setting



12V water  
pump isolator  
switch  
(fig 2)

Battery  
indicator

## Diesel powered Thermo Top C heating system

To operate the diesel powered thermotop heating system rotate the heating toggle switch on the control panel above the work top in the messroom clockwise to the on position, then rotate both fan speed and heater temperature dials clockwise to your preferred setting on the heater control.

After use please remember to rotate both heating dials anticlockwise to the off position, after which you should then rotate the toggle switch to the off position.

**Failure to do this will cause the heating to flatten the battery.**



Fig. 1



Fig. 2



Diesel powered heating system Thermo Top C heating system



Diesel powered heating system exhaust outlet

**CAUTION, HOT: DO NOT OBSTRUCT**



## Section 10 cont.

### Diesel powered heating system fuel pump and filter

Diesel powered heating system fuel pump and filter are situated in the generator room. To gain access remove no.8 pan head screws from cover.



### Frost stat protection

While the ambient air temperature in the messroom is below 5 degrees the heating system will be in frost stat mode to prevent frost damage within the unit. During this time the heater will run to keep the ambient air temperature just above 5 degrees, if you wish to increase the temperature rotate both fan speed and heater temperature dials clockwise to your preferred heat setting.



Frost stat

### Heating outlets/inlets

#### CAUTION

**DO NOT** obstruct outlets/inlets as this could cause the diesel powered heating system to overheat.



Canteen



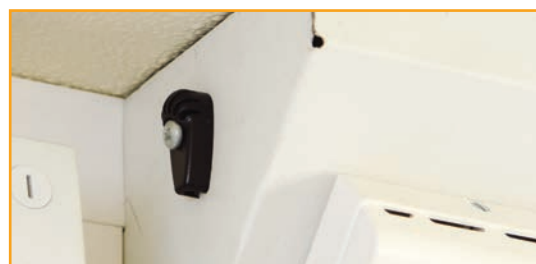
Toilet



Generator room

### Remote temperature sensor

Remote temperature sensor monitors the ambient air temperature of the messroom. Located on the side of the control panel.



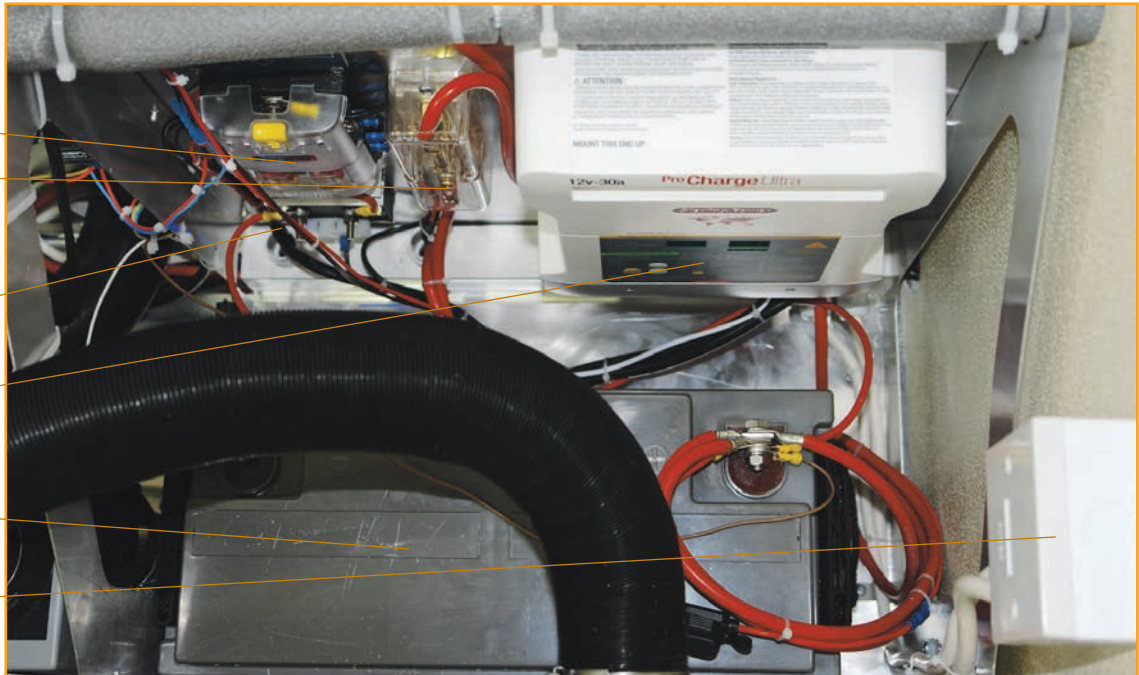


Section 10  
cont.

12V Fuse Board

Inline Fuse  
60 Amp (From  
Charger to  
Battery)

Battery Guard

Sterling Power  
30 Amp Pro  
Charge130 Amp/Hour  
AGM BatteryNon Switched  
Fused Spur  
(Battery Charger)

## Battery Guard

The universal programmable Battery Guard prevents the excessive discharge of the Battery (which would damage the battery) and protects electronic appliances against overvoltage. The BG has an "Automatic Board System Detection"; the BG automatically detects the battery voltage (12v). This does not need to be programmed manually.



LED light

Battery Guard

The battery guard is set to an under voltage of 11.6 volts at which point all 12 volt power will be cut to the unit. To gain 12 volt power simply start the generator and leave to run to fully recharge the 130 amp hour battery (After 1 minute of the generator running you should have full use of the 12 volt power).

The generator has a built in run timer which will allow the generator to run for 2 hours at which point it will shut itself down. After the generator has run you should find you have sufficient 12 volt power to run the 12 volt appliances for around 6 hours.

## Pro Charge Ultra

The Pro Charge Ultra unit will operate when generator is running. During this period the Pro Charge Ultra unit charges the 130A/hr battery.

## Section 10 cont.

### Window

The window is protected by steel shutters, which are locked internally and can only be opened from inside the rest room.

To access the shutters, first open the window.

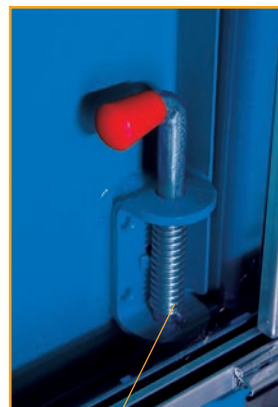


Secure shutters to unit

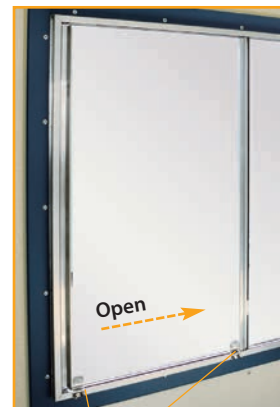


To open the window, release the catch and slide the left hand glass panel open, release lock bolt to open the steel shutters.

When leaving the welfare unit unattended or when transporting, the steel shutters should be closed and locked.



Locking Spring



Catches

## Section 10 cont. Hand pump toilet

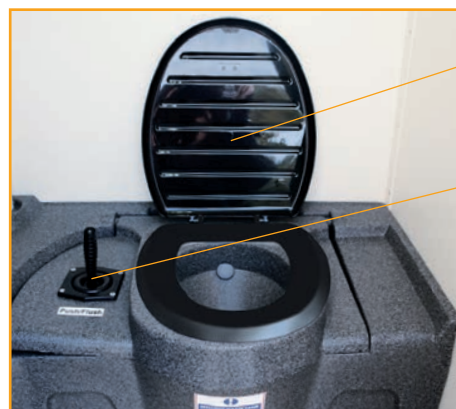
### Toilet

The toilet is a self contained unit which uses toilet fluids for flushing. Filling and emptying the toilet reservoir should be undertaken by a suitable toilet service provider.

To operate the toilet flush after use, move the pump lever back and forth until the toilet bowl is clear.

### Toilet wash area

To operate the hot water push down percussion tap and hot water will flow instantly.



Toilet

Pump Handle



Push button tap

Sink

## Section 11

The on-board diesel generator is used to power the hot water, power points and charge battery.

The generator is located in the warm room and is self contained. The controls for starting and stopping are within the canteen/rest room.

Before starting the generator, always check the engine oil and fuel levels and top up as necessary.

With the unit level, remove the oil dipstick and check that the level is in line with the maximum marker. Top up, via oil filler neck, as necessary with suitable engine oil (10w 40 Semi Synthetic).

## To start the engine

The engine is fitted with an electric start and automatic choke/throttle.

Press the ON/OFF button then press and hold the start button until the engine is running.

Once running, allow the engine to warm up for at least 2 minutes before using power. To stop the engine, simply press the ON/OFF button.

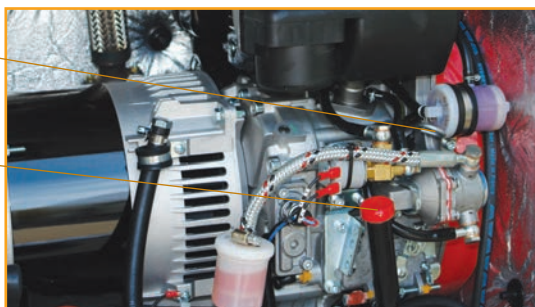
**Note:** Timer switch is set to 2 hours min.



MGTP 6000 SS LA

Dipstick

Oil Filler



Diesel Generator



Fuel Cap

## How to refill the fuel tank



Funnel with protective mesh

Option 1



### Option 1

1. Using the funnel, pour fuel directly from jerry can.
2. Clean surrounding area of any excess fuel.

Option 2



### Option 2

1. Pour fuel from jerry can into smaller container.
2. Using the funnel, pour fuel from container.
3. Clean surrounding area of any excess fuel.

**CAUTION: NO SMOKING. NO NAKED FLAMES. DO NOT OVERFILL FUEL TANK.**



## Section 12

Tightening,  
lubricant,  
brakes, and  
mandatory  
checking

## Service intervals

1. 500 miles or 3 months (Whichever comes first)
  - a. U-Bolt torque setting (see page 37)
  - b. Wheel nuts (see page 35)
  - c. Tyre pressure (see page 35)
  - d. Coupling bolts (see page 34)
  - e. Coupling head bolts (see page 34)
  - f. Leaf spring shackle fixing bolts (see page 37)
2. 5000 miles or 6 months (Whichever comes first)
  - a. Full service inspection of entire unit
3. Every 5000 miles or 6 months thereafter (Whichever comes first)
  - a. Full service inspection of entire unit

## Reason for issuance

We at Groundhog feel that to achieve the maximum life expectancy and best performance our product. It should be serviced and inspected at regular intervals as mentioned above. The following paragraphs highlight the areas of importance for inspection and regular maintenance.

## Serviceable items

- Towing Coupling
- Coupling Safety Cable
- Jockey Wheel
- Hand Brake
- Wheel Hub Brakes
- Wheel Nuts and Tyres
- Pull Rod Mechanised Parts
- Axle Pins
- Leaf Springs and Shackles
- Leaf Spring U Bolt Assembly
- Hydraulic Rams
- Break Away Cable

## Safe working practice

- When working on the under gear, ensure that the unit is safely supported
- **DO NOT RELY ON THE HYDRAULIC LEGS**
- Please see suggestions opposite



### Option A

## Groundhog ram supports

- Lift via hydraulic legs to acceptable height
- Place Groundhog ram supports beneath the unit whilst works are being carried out

Available for purchase: **Part No. GQ03 Ram Support**



### Option B

## Axle stands

- Lift via forklift or suitable lifting apparatus (Note: must be capable of supporting 1800KG)
- Place onto 4 axle stands (Note: must be capable of supporting 1800KG)
- Make a final check of all stands before proceeding with work beneath the Groundhog



### Option C

## Vehicle lift

- Ramp must be capable of supporting 1800KG
- Manoeuvre welfare unit in to correct position making sure ramp arms are clear of unit
- Position ramp arms beneath unit **side rails** and lift unit to desired height



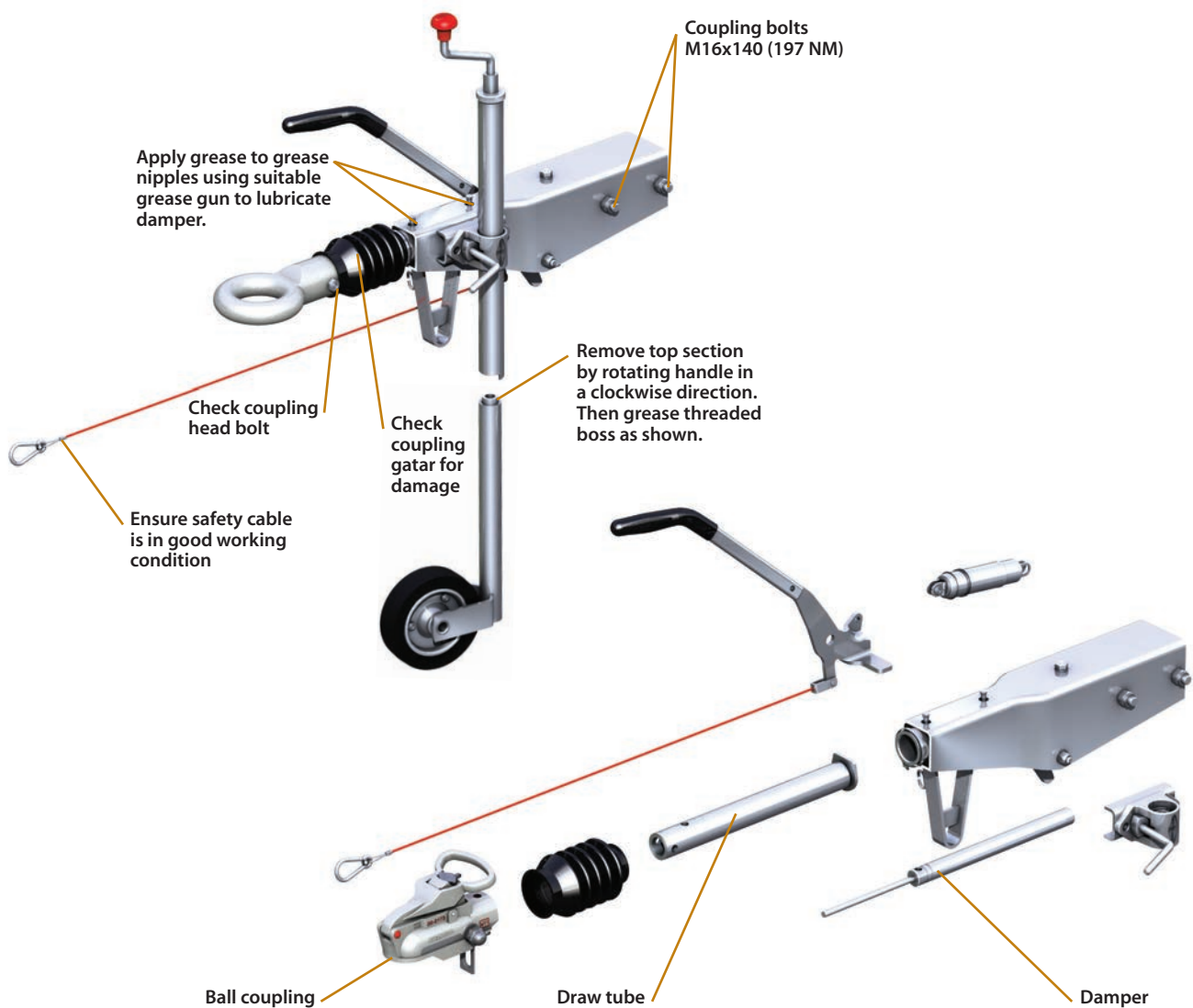
## Section 12 cont.

Tightening,  
lubricant,  
brakes, and  
mandatory  
checking

## Service detail

### 1. Towing coupling, safety cable, and jockey wheel

1. Ensure that the safety cable is present and in good working condition
2. Apply grease to grease nipples lubricating the coupling damper
3. Tighten M16x140mm class 8.8 bolts to 197 NM (Newton Meters)
4. Remove jockey wheel (Hold wheel and rotate handle to remove) and grease threaded boss
5. Check coupling gatar for damage
6. Check ball or eye coupling for excessive wear
7. Check draw tube and damper are not bent

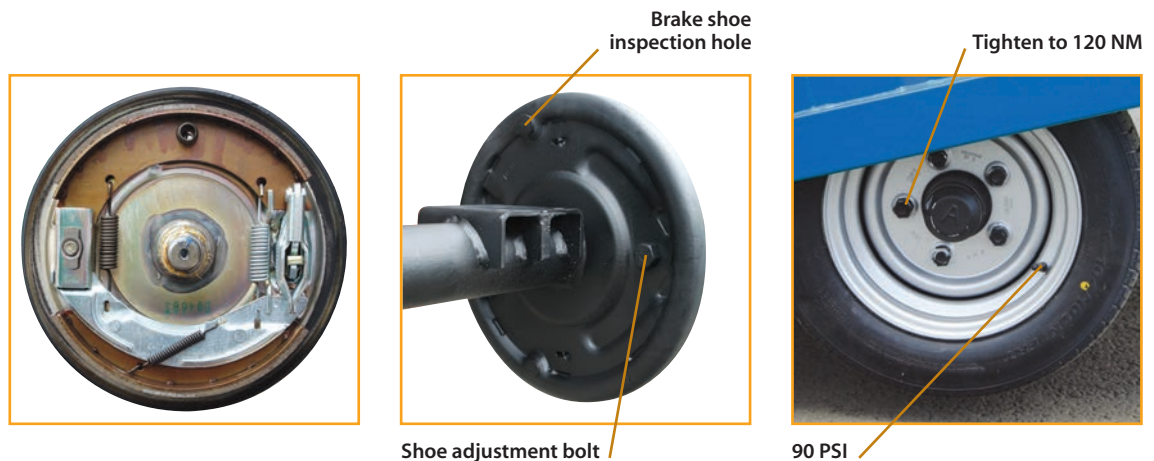


## Section 12 cont.

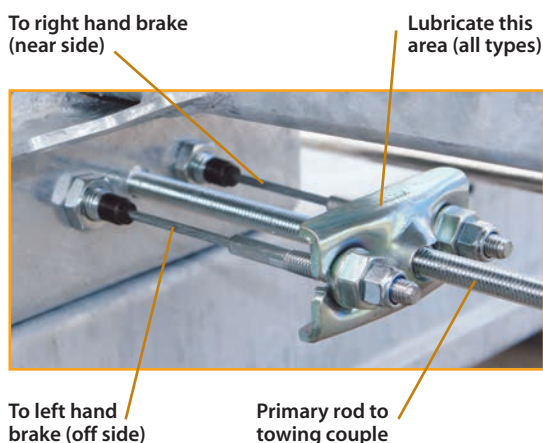
Tightening,  
lubricant,  
brakes, and  
mandatory  
checking

## Service detail 2. Brakes, wheels, and tyres

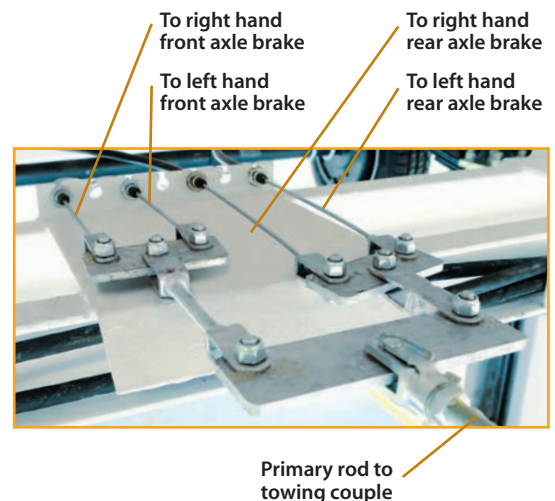
- Ensure Bowden cables (brake cables) are lubricated and operating freely
- Adjustments to the handbrake should be carried out after you have checked and made any adjustments to the brake shoes
- To adjust the brake shoes, jack the wheels clear of the ground and support the unit with a suitable support, see option A or B
- Turn the wheel in a forward direction, while turning the brake adjusting bolt clockwise, until the wheel locks
- Turn the brake adjusting bolt anticlockwise until the wheel turns freely without binding
- If adjustment cannot be achieved or the brake shoes make a grinding noise. Further inspection and possible replacement may be necessary
- Ensure wheel nuts are tightened to 120 NM and that tyre pressure is 90PSI
- Check tyre tread to road legal regulations, condition of brake cable at connect point



### 'Single axle' brake cable arrangement



### 'Twin axle' brake cable arrangement



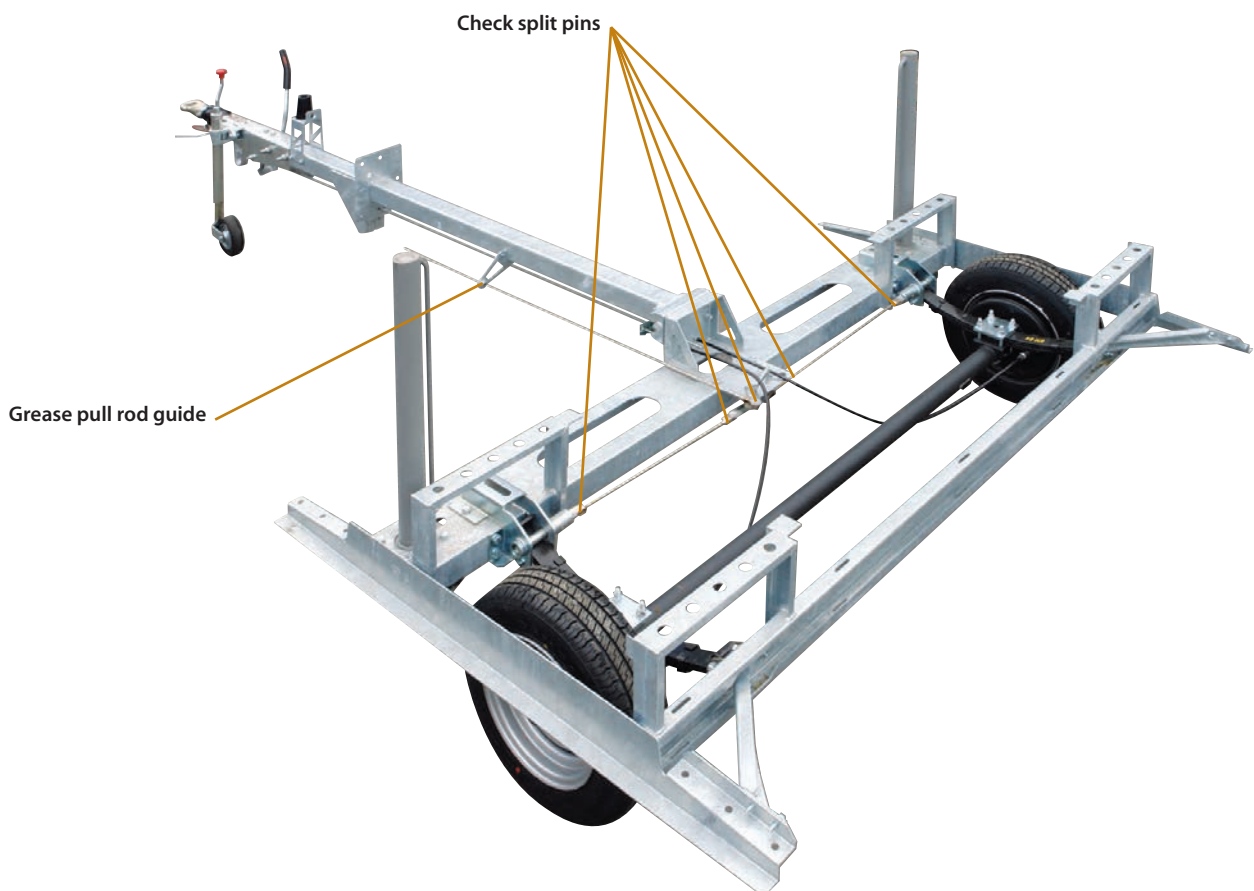
## Section 12 cont.

Tightening,  
lubricant,  
brakes, and  
mandatory  
checking

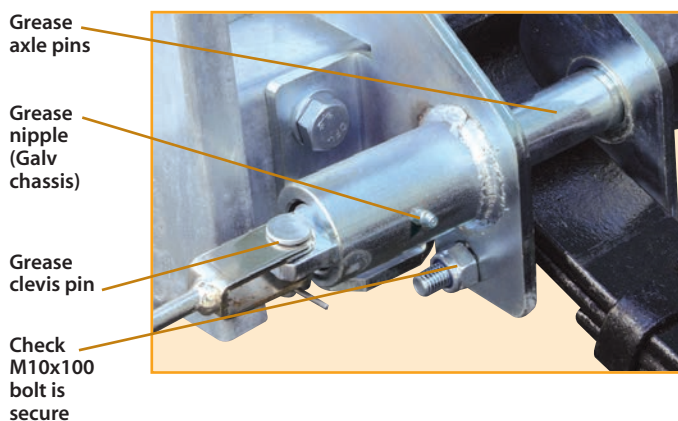
## Service detail

### 3. Pull rod mechanised parts and axle pins

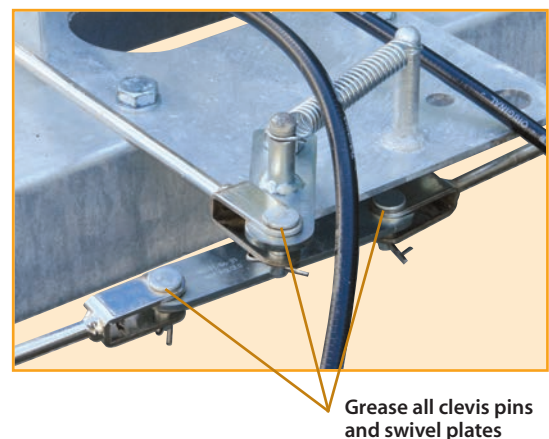
- Lubricate all parts of the mechanised system which includes both Axle Pins, All Clevis Pins, Pull Rod Guide, Tension Spring, and Swivel Plates
- Ensure M10x100 Leaf Spring resting bolt is secure
- Involve an additional operative to engage and disengage the mechanism whilst the other checks for sound operation of the system



A (1 : 1.5)



B (1 : 1.3)



## Section 12

### cont.

Tightening, lubricant, brakes, and mandatory checking

## Service detail

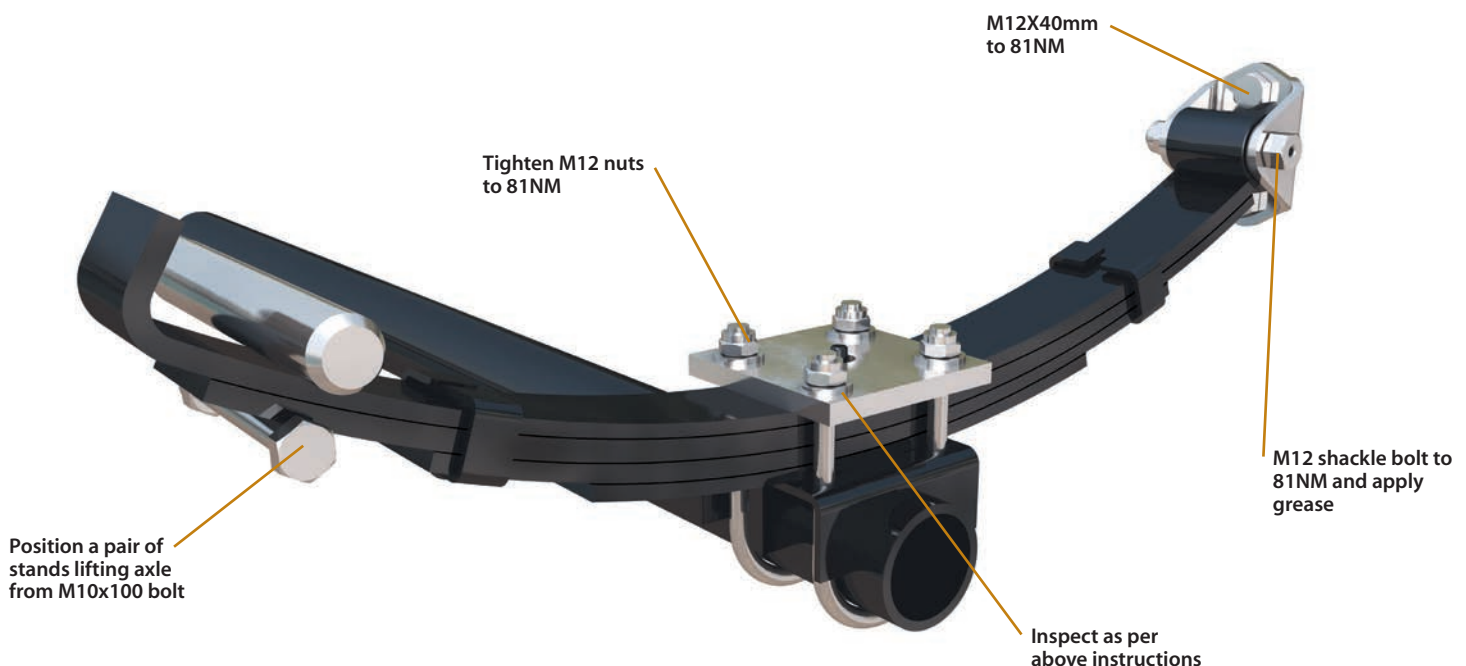
### 4. Leaf springs, shackles, and U bolt assembly

- Firstly, it is good practice to ensure that at all times the 'U' bolt is suitably tightened to 81 NM. Check that the leafs are not free to move and securely clamped by the 'U' bolt and tensioning plate
- When the leaf springs are due for inspection. Elevate to option 'B' as shown in page 2. Place 2 additional stands beneath axle raising it from the M10x100 bolts. The stands should be rated for at least 250KG per pair allowing for a small factor of safety. The M10X100 bolts will still be in place for additional safety

#### Perform one at a time:

Loosen the M12 Nyloc nuts enough to lift the tensioning plate so that the leafs of the spring are visible for inspection. Do so in a diagonal pattern so as not to disturb the parallel alignment of the spring in the direction of the unit

- Check condition of 'U' bolts for any signs of severe elongation or deformation. Replace if required
- Check leaf spring for any signs of fatigue and or creep fracture. If this exists replace springs immediately. If ok, tighten springs in a reverse pattern to ensure even tightening and parallel alignment. It is good practice to pack the spring centrally between the front axle pin plates to ensure good parallel alignment after tightening.
- Additional paint could also be applied to the springs if required to prevent corrosion. A zinc enriched primer could also be utilized to enhance rust protection
- Check M12 Shackle bracket is tightened to 81 NM and apply grease to grease nipple supplied
- Tighten M12x40mm class 8.8 bolts to 81 NM and check their condition





## Section 12 cont.

Tightening,  
lubricant,  
brakes, and  
mandatory  
checking

## Service detail

### 5. Preventing leaf spring failure

#### 1. 500 Mile / First 3 month mandatory inspection

It is a mandatory requirement, that after a maximum of 500 miles. All 'U' bolts are checked to a tightening torque of 81NM.

#### 2. Equipment check (tightening)

Please ensure that your equipment is suitably calibrated to achieve the above mentioned torque setting. Failure to do so could result in a loose fixing or bolt shearing

#### 3. Sufficient greasing

Ensure grease is applied correctly to both Leaf Springs.

#### 4. Leaf spring rust inspection

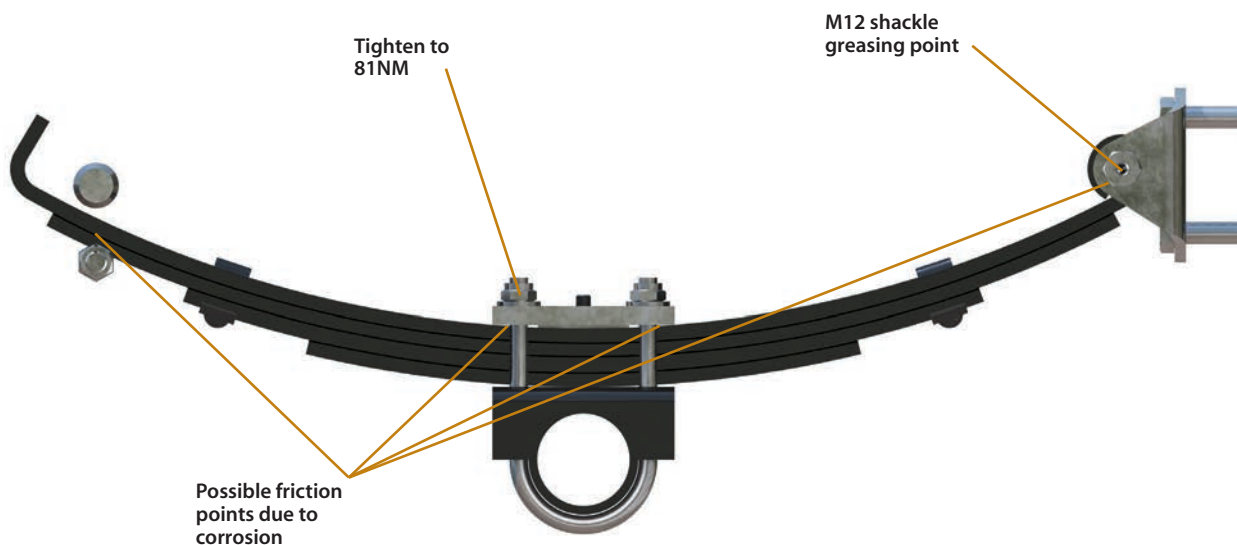
If your leaf springs are severely corroded this can increase friction between the following:

- Tensioning plate and leaf spring
- Front Axle pin and leaf spring
- M12 shackle fixing and leaf spring

This can exert abnormal forces which are outside of the springs normal working range resulting in spring failure. If you feel that the springs are subject to severe corrosion it is highly recommended they are replaced immediately.

#### 5. Avoid large potholes

It is inevitable that Groundhogs require towing across uneven site grounds from time to time. Where possible, large potholes should be avoided to prevent springs being subjected to abnormal loading conditions



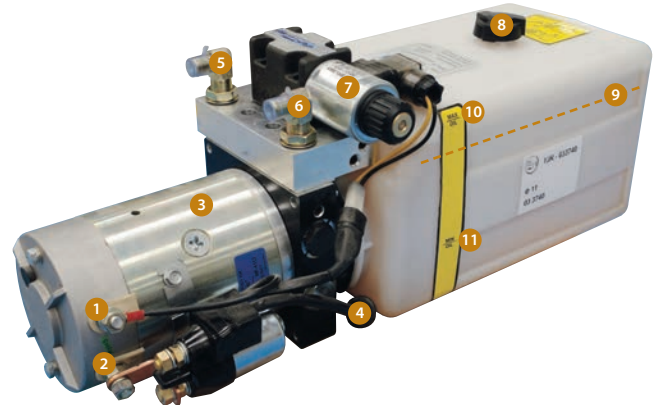
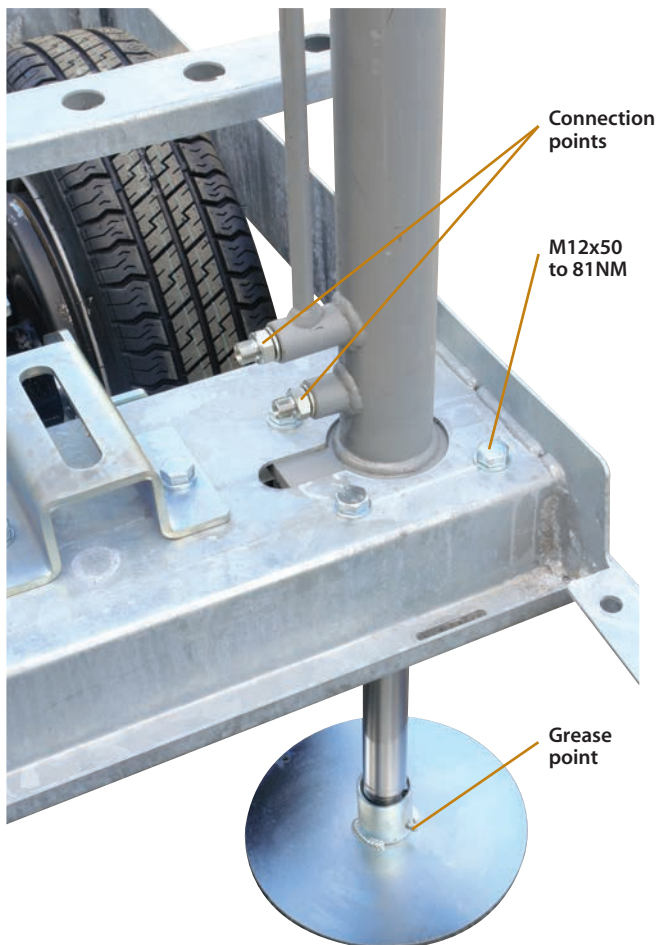
## Section 12 cont.

Tightening,  
lubricant,  
brakes, and  
mandatory  
checking

## Service detail

### 6. Hydraulic rams

- Tighten M12x50mm class 8.8 bolts to 81 NM and check their condition
- Check Ram condition
- Check for any hydraulic fluid leaks in the line and at all connection points
- Apply grease to grease nipple as shown below
- Check hydraulic oil fill level in reservoir is correct to level indicator. Groundhog recommends AF 22 as the preferred brand of hydraulic oil
- Only check hydraulic oil level when rams are fully retracted



1. Negative stud
2. Positive stud
3. Motor
4. Hydraulic remote plug
5. Hydraulic oil feed
6. Hydraulic oil return
7. Solenoid block
8. Reservoir Filler cap
9. Ideal operating level
10. Maximum level indicator
11. Minimum level indicator

### Section 13

#### **Where can I obtain replacement keys?**

Replacement keys can be obtained by contacting Groundhog. If all keys are lost a new lock must be fitted. Replacement keys for toilet compartment can be supplied by Groundhog.

#### **What is the correct pressure for the tyres?**

90 psi

#### **Where should I store the lighting tailboard and jockey wheel?**

The Lighting Tailboard can be stored in the warm room and the jockey wheel can be stored safely under the Groundhog when lowered to the floor.

#### **How many litres of fresh water does the toilet require?**

30 litres

#### **When does fluid used in the toilet require replacing?**

When water changes colour from blue

#### **How much toilet fluid is required when replacing the water?**

Minimum of one 250 ml capful per full tank

#### **What is the recommended minimum service interval for the toilet?**

Once per week. Normal usage: 6 men = 5 days

#### **What kVA can the generator supply?**

Diesel = 6 kVA

#### **What is the capacity of the generator fuel tank?**

48 litres

#### **How long will the generator run on a full tank of fuel?**

The diesel operated 6 kVA generator uses 1.9 litres/hour = approx 25 hours

#### **What is the recommended service interval of the generator?**

Every 250 hours

#### **What is the torque setting of the wheel nuts?**

5 STUD M16 120NM

#### **What is the recommended service interval of the groundhog?**

Every 3 months

#### **What solution is used in the toilet?**

Toilet fluid

## Fault finder

### Section 14

#### **The generator will not start:**

The battery may be flat. Check the battery charging unit is switched on - this can be found below central seat fob.

Check the fuel level. The gauge is mounted in the filler cap.

Check oil level.

#### **The generator is running but I still have no power:**

Check that the RCD (mounted on the side of the generator) is in the 'ON' position.

Check that the RCD and the MCB's have not tripped in the consumer board (on the interior front wall of the welfare area).

Check the mains plug is connected below the front nose cone.

#### **The hand wash will not operate:**

Check the selector switch on the front wall is set to '2 Handwash'.

Check the handwash main isolator switch situated above the handwash touch button is on.

Check the pump isolator switch situated below the sink is on.

Check the 13 amp fuse in isolator switch situated directly above hand wash.

Check the 1 amp fuse in fused spur situated below work top.

Check water level and ensure the flow is not obstructed.

Make sure touch button is pressed to activate hand wash.

## Section 15

### Protecting your Fusion water system over the winter period

Allowing water to freeze in the system of your groundhog unit may result in damage to the water pump and hand wash.

To help prevent this from happening it is advised you follow the following procedures when unit is not being used over night, or left for long periods without use.

*To bring handwash system out of winterised mode, see page 14.*

**Note:** There will be a short delay whilst the water pump replenishes itself.

#### Step 1



Remove blue fresh water pipe from the water butt below the sink.

#### Step 2



Push handwash touch button, situated next to heat adjuster and leave to run until all the water has been pumped out of the system. This should take approximately 20-30 seconds.

#### Step 3



Switch off handwash main isolator switch, situated above the handwash touch button.

#### Step 4



Switch off pump isolator switch, situated below the sink.

#### Step 5



Turn power selector switch, situated under the consumer unit to zero(0).

#### Step 6



Drain both fresh and waste water containers.



## Section 15

## Protecting your Fusion+ water system over the winter period

Allowing water to freeze in the system of your groundhog unit may result in damage to the water pump.

To help prevent this from happening it is advised you follow the following procedures when unit is not being used over night, or left for long periods without use.

### Step 1



Go to the control panel in the messroom, rotate the water pump selector switch clockwise to the "ON" position.

### Step 4



Make your way to the toilet room, then press and hold the tap again until the system runs dry.

### Step 2



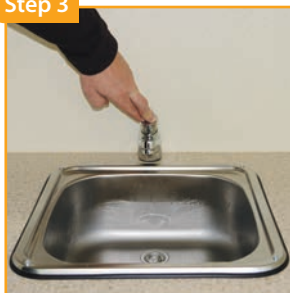
Remove blue fresh water pipe from the water butt below the sink.

### Step 5



Return to the control panel in the messroom, rotate the water pump selector switch anti-clockwise to the "OFF" position.

### Step 3



Push and hold the tap in the messroom until the system runs dry.

### Step 6



Replace blue fresh water pipe ready for the next time the unit is utilised.

### Checks prior to towing

Before towing it is the responsibility of the operator (end user) to ensure the following:

Please check off points below prior to towing:

- |    |   |                                     |
|----|---|-------------------------------------|
| 1  | Do not use the unit to carry equipment                                | <input checked="" type="checkbox"/> |
| 2  | Remove any loose items before moving the unit                         | <input checked="" type="checkbox"/> |
| 3  | Lock all doors and windows  | <input checked="" type="checkbox"/> |
| 4  | Retract the hydraulic legs fully before moving the unit               | <input checked="" type="checkbox"/> |
| 5  | Secure the nose cone  | <input checked="" type="checkbox"/> |
| 6  | Check the condition and operation of the jockey legs                  | <input checked="" type="checkbox"/> |
| 7  | Check the breakaway cable is fitted and in good condition             | <input checked="" type="checkbox"/> |
| 8  | Check the lighting board is fully operational                         | <input checked="" type="checkbox"/> |
| 9  | Check tyre pressure regularly if moving the unit to various locations | <input checked="" type="checkbox"/> |
| 10 | Keep within the speed limits  | <input checked="" type="checkbox"/> |
| 11 | <b>Report any defects to hire company</b>                             | <input checked="" type="checkbox"/> |

## Diesel powered heating systems service schedule

The diesel powered heater should be checked and serviced every 6 months or 126 operating days by a recognized service engineer, it is recommended a service is carried out prior to utilising the heating after a long period of non-use.

In addition it is recommended that weekly visual checks are carried out as per schedule below.

### All heaters

#### Electrical connections

- 1 Check fuses for signs of oxidation and contact resistance, change as required



#### Fuel system

- 2 Check pick up connection for leaks and security



- 3 Check dosing pump for security and leaks



- 4 Ensure all fuel pipes are securely fixed and cannot chaff and are not near any source of heat



- 5 Check fuel pipes for leaks and security



#### Exhaust system

- 6 Check the exhaust pipe to ensure that there are no restrictions/obstructions



- 7 Ensure that the exhaust system is secure and away from any flammable material



#### Combustion air

- 8 Ensure any combustion air pipe installed is securely fitted



- 9 Check that the inlet is in a clean dry area



#### Hot air ducting

- 10 Check condition and change as necessary



- 11 Ensure that the ducting is not crushed or contains any sharp bends



- 12 Ensure all hose clips are in position and tight



- 13 Examine all air outlets to ensure they operate correctly and are not blocked



- 14 Check the recirculating air intake grill for blockages and cleanliness



### Thermo top "C" heaters only

#### Water system

- 15 Check all water connection for leaks and rectify as required



- 16 Check and adjust strength of anti-freeze as required



- 17 Top coolant system up as required



## 500 mile maintenance checklist

500 miles or 3 months, whichever comes first:

a. U-Bolt torque setting	<input type="checkbox"/>	d. Coupling bolts	<input type="checkbox"/>
b. Wheel nuts	<input type="checkbox"/>	e. Coupling head bolts	<input type="checkbox"/>
c. Tyre pressure	<input type="checkbox"/>	f. Leaf spring shackle fixing bolts	<input type="checkbox"/>

## 5000 mile maintenance schedule

Groundhog Unit & Chassis:

Months	6	12	18	24	30	36	42	48	54
Miles	5000	10,000	15,000	20,000	25,000	30,000	35,000	40,000	45,000
Check all locks are operational	I/G	I	I/G	I	I/G	I	I/G	I	I/G
Check nose cone securing bolt & clip	I	I	I	I	I	I	I	I	I
Check condition & operation of the jockey wheel	I/G	I/G	I/G	I/G	I/G	I/G	I/G	I/G	I/G
Check condition & operation of the breakaway cable	I	I	I	I	I	I	I	I	I
Check/adjust tyre pressure	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A
Check/replace lighting board and electrics	C/I	C/I	C/I	C/I	C/I	C/I	C/I	C/I	C/I
Check coupling for any damage	I/G	I/G	I/G	I/G	I/G	I/G	I/G	I/G	I/G
Check general cleanliness	C	C	C	C	C	C	C	C	C
Check and empty toilet waste and add chemical	C	C	C	C	C	C	C	C	C
Check soap, paper towel, drinking cup & lavatory paper levels	C	C	C	C	C	C	C	C	C
Check all fitted appliances	C/R	C/R	C/R	C/R	C/R	C/R	C/R	C/R	C/R
Check carbon monoxide monitor	C/R	C	C/R	C	C/R	C	C/R	C	C/R
Check all water levels	C	C	C	C	C	C	C	C	C
Check operation of pull rod and pins	C/G	C/G	C/G	C/G	C/G	C/G	C/G	C/G	C/G
Check chassis for any damage	C/I	C/I	C/I	C/I	C/I	C/I	C/I	C/I	C/I
Check/grease axle pins & spring hangar bolts	C/G	G	C/G	G	C/G	G	C/G	G	C/G
Check/grease all bolts/split pins and moving parts	C/G	G	C/G	G	C/G	G	C/G	G	C/G
Check/grease ram bolts and base feet	C/G	G	C/G	G	C/G	G	C/G	G	C/G
Check for hydraulic oil leaks	C	C	C	C	C	C	C	C	C
Check/top up hydraulic oil tank	C	C	C	C	C	C	C	C	C
Visually check axle for damage	C/R	C/R	C/R	C/R	C/R	C/R	C/R	C/R	C/R
Check/secure all pipes and cables	C	C	C	C	C	C	C	C	C
Check/adjust wheel bearings	C/A	C	C/A	C	C/A	C	C/A	C	C/A
Check brake operation/adjust	C/A	C	C/A	C	C/A	C	C/A	C	C/A
Check wheel nuts for tightness	C/A	A	C/A	A	C/A	A	C/A	A	C/A
Check/adjust hand brake lever	C/A	C	C/A	C	C/A	C	C/A	C	C/A



## 5000 mile maintenance schedule (continued)

## Groundhog Generator Engine &amp; Electrical:

Months	6	12	18	24	30	36	42	48	54
Miles	5000	10,000	15,000	20,000	25,000	30,000	35,000	40,000	45,000
Every 250 hours	Check/change engine oil (recommended service intervals)	C	C	C	C	C	C	C	C
	Check/change oil filter (recommended service intervals)	I	I	I	I	I	I	I	I
	Check/clean fuel tank (recommended service intervals)	I	I	I	I	I	I	I	I
	Check/change fuel filters (recommended service intervals)	C	C	C	C	C	C	C	C
	Check/change air filter (recommended service intervals)	C	C	C	C	C	C	C	C
	Check/adjust valve clearance (NA on MGTP 6000 SS-LA)	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A
	Check all electrical connections for tightness	C/A	C/A	C/A	C/A	C/A	C/A	C/A	C/A
	Run engine, check for fuel/oil leaks	C	C	C	C	C	C	C	C
	Check and top up oil after servicing and running	C	C	C	C	C	C	C	C
	Test generator on load	T	T	T	T	T	T	T	T
	Check MCB's and RCD (generator & welfare compartment)	I	I	I	I	I	I	I	I
	Check Volts/Amps and Hr meter operation	C	C	C	C	C	C	C	C
	Check battery/charging rate	C	C	C	C	C	C	C	C
	Check output sockets for damage/replace	I	I	I	I	I	I	I	I
	Check output terminals for damage/replace	I	I	I	I	I	I	I	I
	Check earth straps on all doors	C	C	C	C	C	C	C	C

The service inspection complies fully with Groundhog specifications and procedure.

## 500 mile maintenance

Technicians signature:

.....

Authorised service stamp:

.....

Manufacturers service stamp:

## 5000 mile maintenance

Technicians signature:

.....

Authorised service stamp:

.....

Manufacturers service stamp:







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